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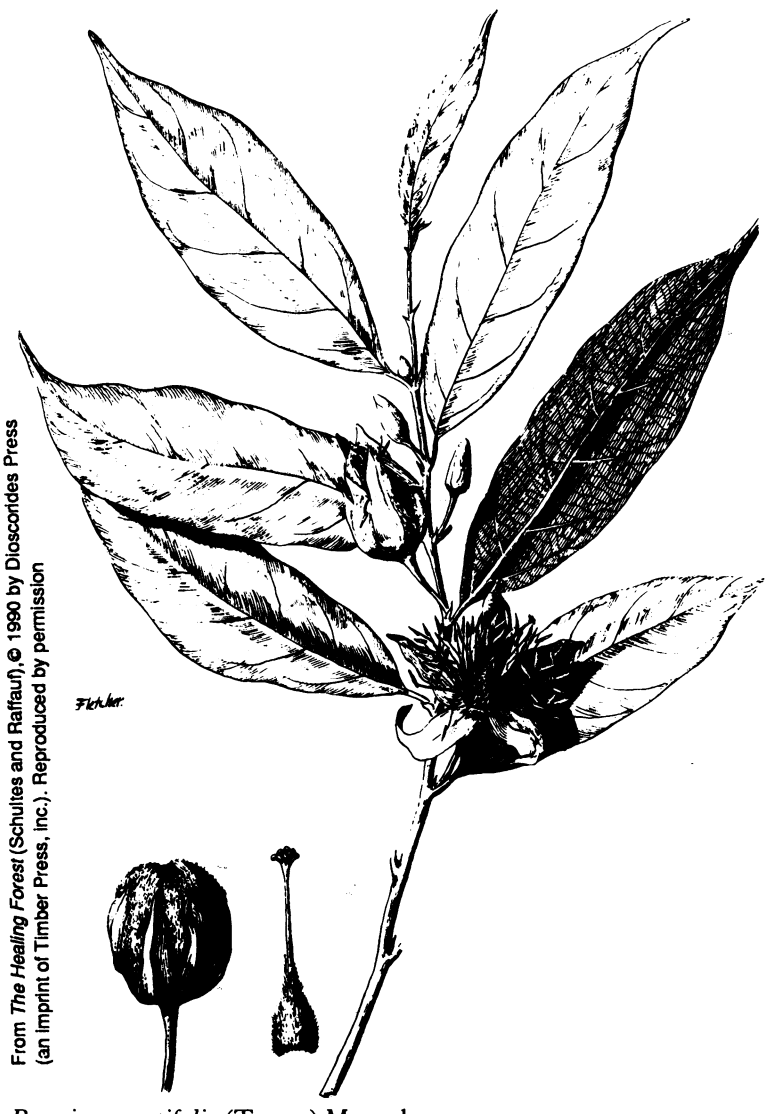
PLANTS IN CARDIOLOGY



Ryania angustifolia (Turcz.) Monach.

Ryanodine

Ryanodine is a pseudo-alkaloid that is found in *Ryania angustifolia* (Flacourtiaceae) and other species of *Ryania*. It has proved valuable in the study of the calcium release channel of the sarcoplasmic reticulum which it blocks in a dose related manner. Such studies showed that the sarcoplasmic reticulum is a major intracellular calcium store and that it provides most of the energy for cell excitation.

The genus *Ryania* is named after John Ryan, an eighteenth century physician and Fellow of the Royal Society, and its species are small trees in tropical Central and South America. The roots are poisonous and are used to kill rats and alligators, to rid clothing and hair of lice, and even for euthanasia of the elderly by a nomadic Amazonian tribe. Ryanodine was first isolated from *Ryania speciosa* at the Merck Research Laboratories in 1948 during a survey of plant materials for new insecticides.

The family Flacourtiaceae contains a Burmese tree *Hydnocarpus kurzii* whose fruit yields Chaulmoogra oil which was the only effective treatment for leprosy before modern antibacterial drugs. The genus *Idesia* contains salicin, and other genera are used as arrow poisons.

A HOLLMAN